

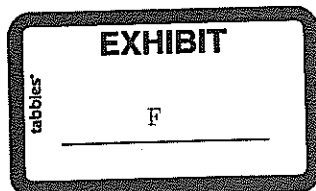
IN THE UNITED STATES DISTRICT COURT FOR
THE NORTHERN DISTRICT OF OKLAHOMA

State of Oklahoma, et al.,)	05-CV-0329 GKF-SAJ
)	
Plaintiffs,)	
)	
vs.)	AFFIDAVIT OF
)	BILLY R. CLAY,
)	MS, DVM, DABT
Tyson Foods, Inc. et al.,)	
)	
Defendants.)	

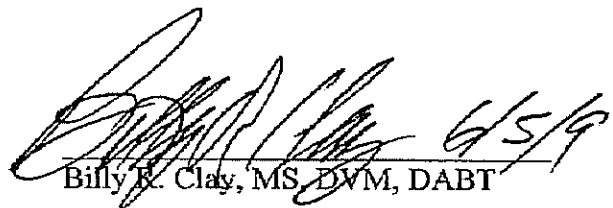
State of Oklahoma)
) ss.
County of Payne)

I, Billy R. Clay, MS, DVM, DABT, hereby state as follows:

1. I am an expert witness retained by the Defendants in this lawsuit.
2. I have published articles in peer reviewed journals, trade journals and other publications related to agricultural production with a focus on animal health and animal/plant interactions with an emphasis on water quality. A list of these articles is attached as Exhibit A.
3. I authored all of the articles listed in Exhibit A more than ten years before I signed my Rule 26(2)(B) report, and therefore, were not included in the report.
4. I have made many presentations at conferences and meetings of regional, state and national animal science, veterinary and livestock associations related to agricultural production with a focus on animal health and animal/plant interactions with an emphasis on water quality.



5. I have participated in studies involving the analysis of dry weight of animal manures and the major nutrients therein. The results of these studies were reviewed by the Food & Drug Administration.
6. My criticisms of the so-called "mass balance" study prepared by Plaintiffs' expert, Meagan Smith, were based in part on documents, materials and communications I have read or had in my role as a consultant over the past forty years. To the best of my recollection, the list attached as Exhibit B to this Affidavit cites the documents and materials that discuss the requirements of a "mass balance" study.


Billy R. Clay, MS, DVM, DABT

My Commission expires:

01-28-11

My Commission Number:

02020518


Carol Ann Naples 06-05-09
NOTARY PUBLIC

Exhibit A

Publications:

Clay, B. R. Double Harvesting Grain Sorghum in Oklahoma. Oklahoma State University 1966

Clay, Billy R. Raymond Arnold and J. Q. Lynd. Some Parameters in Fungicidal Control of Seedling Collar Rot. Proceeding of the Fourth National Peanut Research Conference, Tifton, GA. July 14-15, 1966.

Clay, B. R. Wheat Pasture Poisoning. JOVMA 24(4): 1972.

Specht, T. E., B. R. Clay and Billy C. Ward. Bagpod (Glottidium vesicarium) Toxicity in Southeastern Oklahoma Cattle. JOVMA 25 (4): 1973.

Clay, B. R. Stocker Cattle Losses on Small Grain Pastures. JOVMA 26 (4): 1974

Clay, B. R., Gene Hoehne and A.D. Tillman. Animal Problems in Grazing Wheat and Other Small Grains Pastures. OSU Extension Facts, No. 3007, November 1972.

Clay, B. R. Lavoy Croy, Gene Hoehne, Floyd Horn and A.D. Tillman. Progress of Research on the Stocker Syndrome in Cattle Grazing Small Grain Pastures. OSU Extension Current Report No. 3003, October 1973.

Clay, B. R. A profile on New Position Acquisitions by the 1974 Graduating Class, College of Veterinary Medicine, Oklahoma State University, J of Vet. Med. Ed. 2(2):47, 1975.

Edwards, W. C., B. R. Clay and W. B. Buck. Determination of Lead Levels in Beef Randomly Selected from Supermarkets. Vet. and Hum. Tox. 28(2):70, 1976.

Clay, B. R. Poisoning and Injury by Plants. In Current Veterinary Therapy VI, W. B. Saunders Co. Philadelphia, PA. 1976.

Clay, B. R. W. C. Edwards and D. R. Peterson. Toxic Nitrate Accumulation in the Sorghums. Bov. Prac. J. No. 11. November, 1976.

Bowles, J. W. and B. R. Clay. Economic Survey of Veterinarians Within the State of Oklahoma. JOVMA 29(3): July, 1977.

Clay, B. R. Oak Poisoning. In Current Veterinary Therapy-Food Animal III. W. B. Saunders Co. Philadelphia, PA. 1992.

Edwards, W. C. and B. R. Clay. Reclamation of Rangeland Following Lead Poisoning from Airborne Contamination. J. Vet. Hum. Tox, 19(4): November, 1977.

Clay, B. R. et al. Numerous confidential Technical Reports and Publications pertaining to Product Development and Defense for submission to the FDA-CVM from 1977 to the present. A partial list includes:

- Poloxalene (Bloat Guard®) for the Prevention and Control of Bloat in Cattle on Grass Pastures.
- Prostaglandin F_{2α} (Lutalyse®) for Estrous Synchronization and Abortion of Cattle and Swine.
- Melengestrol Acetate (MGA®) for Improvement in Rate of Gain, Feed Efficiency and Estrous Suppression in Heifers.
- Lincomycin (Lincomix®) for the Control of Swine Dysentery, Mycoplasma Pneumonia and Improvement of Rate of Gain in Hogs.
- Lincomycin for the Control of Necrotic Enteritis in Poultry.
- Lincomycin-Spectinomycin (L-S 50®) for Treatment of Bovine Respiratory Disease.
- Amatraz (Mitaban®) for the Treatment of Demodectic Mange in Dogs.
- Ceftiofur Sodium (Naxcel®) for Treatment of Bovine Respiratory Disease and Colibacillosis (early mortality) in Chicks.
- Ceftiofur Hydrochloride (Excenel®) for Treatment of Bovine Respiratory Disease.
- Ceftiofur Free Acid (Excede®) for Treatment of Bovine Respiratory Disease.
- Pirlimycin Hydrochloride (Pirsue®) for the Treatment of Bovine Mastitis.
- Clindamycin Hydrochloride (Antirobe®) for the Treatment of Wounds and Abscesses caused by Staphylococcus aureus.
- Minoxidil for the Improvement of Weight Gain in Feedlot Cattle.
- Estradiol 17_β and Progesterone (Implus®-S) for Improvement of Weight Gain and Feed Efficiency in Cattle.
- Estradiol 17_β and Testosterone (Implus®-H) for Improvement of Weight Gain and Feed Efficiency in Cattle.
- Spectinomycin Hydrochloride (Adspec®) for the Treatment of Bovine Respiratory Disease.

Presentations:

- Nitrates in Livestock Feeds. Norwest Arkansas Veterinary Medical Assoc. Aug. 1970.
- Review of Anatomy of the Canine Rear Limb. Tulsa Vet. Med. Assoc. Nov. 1971.
- Wheat Pasture Stocker Syndrome. North Cent. Ok. Vet. Med. Assoc. Oct. 1973.
- Progress of Research on Stocker Syndrome of Wheat Pasture Stocker Cattle. Presented at the 58th annual OVMA Convention, Tulsa, Jan. 25, 1973. (Pub. Proc.)
- Animal Losses on Small Grain Pastures. Presented at the 48th Annual Southwestern Fertilizer Conf. July 18, 1973 (Pub. Proc.)
- Poloxalene for the Prevention of Wheat Pasture Bloat. Presented at the Midwest Animal Science Conf. Overland Park, KS July 11, 1974 (Pub. Proc.).

Common Toxicants Encountered in Large and Small Animal Veterinary Practices. AR SW Vet. Med. Assoc. Magnolia, AR, April 1975.

Toxicology for the Mixed Animal Veterinary Practice. Fort Smith Area Vet. Pract. Assoc. June 1975.

Sudden Death on Wheat Pasture: Acute Frothy Bloat. Vet. Nutr. Assoc. Meeting. Anaheim, CA. July 1975 (Pub. Proc.)

Wheat Pasture Poisoning. Amer. Assoc. of Bovine Pract. Atlanta, GA. Dec. 10, 1975. (Pub. Proc.)

Control of Wheat Pasture Bloat. OK Cattle Feeder's Seminar, Stillwater, OK. Feb. 5, 1975.

Utility of Nitrate and Prussic Acid Field Tests. Demo and Discussion at the 61st OVMA Convention, Oklahoma City, Feb. 8, 1976.

Selected Topics in Toxicology for the Vet. Pract. Northwest AR Vet. Assoc. Meeting, Rogers, AR May, 1976.

Soil, Plant and Animal Interrelationships in the Grass Tetany Syndrome. LA Vet. Med. Assoc. Baton Rouge, June 4, 1976.

Toxic Plants of the South Central Region of OK. South Central OK Vet. Med. Assoc. Aug. 1976.

From 1977 to 2003 the results of research on development of the products listed above were presented at dozens of regional, state and national association meetings for animal scientists and veterinarians. Some presentations were made at various livestock association meetings.

Agonomic and Toxicologic Consideration of Soil-Plant-Animal Interrelationships in Stocker Cattle. Academy of Veterinary Consultants, Starkville, MS June 5, 1987. (Pub. Proc.)

Atypical Interstitial Pneumonia in Cattle. Presented at the Academy of Veterinary Consultants Meeting at Taupalepis, Mexico Aug. 10, 1999.

FDA-CVM pharmaceutical Approval Process presented to the Amer. Academy of Comparative and Vet. Tox. AVMA Convention July 1998.

Oil and Gas/Agriculture Interface in Oklahoma. OVMA Convention, Oklahoma City, Jan. 25, 2008. (Pub. Proc.)

Exhibit B

Personal Communications with Dr. Halin Zhang, Oklahoma State University Department of Agronomy.

National Research Council. 1993. Soil and Water Quality-an Agenda for Agriculture. Pp 283-311 and pp 431-477. National Academy Press.

Cerosaletti, P. E. et al. 2004. Mass Nutrient Balance Case Studies. J. Dairy Sci. 87:2314-2323.

Qiyang, Da et al. 1996. Agricultural Phosphorus Assessment in the Great Lakes Basin: A Case Study. The Great Lakes Commission, East Lansing, MI April 23-24.

Spears, R. A. et al. 2003. Whole Farm Phosphorus Balance on Western Dairy Farms. J. Dairy Sci. 86:688-695.